IT Unit 3

Topic 1

# Ch 1 Organisations & Data Management

**Collecting data online, p 3**

1. Why do organisations collect data?

* Organisations collect data to gain information on their customer’s habits and wants, they do this to improve their business and point out weaknesses that can be improved/fixed.

1. Explain the advantages to be gained from collecting data online in terms of both efficiency and effectiveness.

* **Efficiency**- It saves time and effort because the double handling of forms is no longer required, so money can be saved because extra staff members are not needed for data entry.

**Effectiveness**- Online forms offer greater accuracy by overcoming transcription issues associated with messy handwriting that is difficult to decipher and thus transcribe.

1. How are required fields generally indicated on an online form and why do organisations do this?

* These mechanisms ensure that organisations collect complete data from the user, and they don’t miss important fields such as an email address.

1. What is a potential problem with direct input?

* The problem with this direct input is that the customer can input incorrect data, which will not necessarily be picked up by electronic validation.

1. What other advantages are there for businesses in a global economy?

* Online data acquisition can also work for businesses because it can provide them with marketing opportunities with their expanded customer base. Their potential customers can come from anywhere in the world, rather than being limited to their local community.

1. What other services are provided by businesses online?

* Tracking information, that allows you to view where your order is in transit right up until the moment it reaches your doorstep.
* Electronic interactions concerning a returned item.
* Online booking system where a range of organisations will be alerted to and respond to your bookings.

**Why users supply data for online transactions,** p 5

1. Elaborate under each of the following headings:
   1. Convenience

* Online shopping has changed the way people shop, yes the odd person here or there might like to go into the shop to have a browse around others such as time-poor people, the elderly or sick prefer the convenience of not having to leave home.
  1. Variety of choice
* For organisations, access to a global market is an important reason for online presence. The other side of this, of course, is that consumers are the ones creating the global market by their desire and willingness to purchase what they want, regardless of where it originated.
  1. Reducing costs
* It can expensive to travel to a certain shop in order to compare products. Fuel and parking costs dissuade consumers from shopping around. If consumers compare products online, it saves money and time. Most online stores deliver and in some cases it can be free of charge, although it is important to look around because this can change.

**Techniques used by organisations to acquire data online, p 9**

1. Prior to web based forms, how did organisations collect data?

* They did this by asking customers to fill out paper forms. The data on these forms would then be typed by a data-entry-operator who would transfer the data acquired onto a database. He would then manually validate this data and it would also be validated by a machine.

1. What is the role of data acquisition software?

* Is to create an online environment that encourages users to interact with the system with ease by providing an interface that is both usable and accessible.

**User flow diagrams,** p 11

1. What is the purpose of a user flow diagram?

* To document how a user will interact with an online solution, it is similar to a layout diagram but it does not show as much detail.

1. In using a UFD what is important?

* It’s important to show clearly the multiple entry points that could get a user to the beginning of a transaction and the key data flows or interactions they must go through to complete the transaction.

**Techniques for efficient and effective online data collection,** p 13.

1. List some techniques for efficient and effective online data collection.

* Keep it short: Only include a few questions on each screen and break large sets of questions into separate screens.
* Use clear labels that are easy to understand.
* Appropriate field types
* Text fields: Ensure there is enough room for the text.
* Allow the computer to format data, such as phone numbers, to increase readability.
* Ensure error messages are informative.
* Map clear paths to completion.
* Be mobile-friendly.

1. What tool is used to design a form prior to creating a data collection screen?

* It’s important to be able to design a form using a layout diagram and annotate it to show how you have included security and incorporated features that add to the efficiency and effectiveness of the data collection process.

**Design Principles,** p 15

1. To be efficient and effective a data collection form needs to conform to design principles of appearance and functionality; briefly elaborate under each of the following:
   1. Appearance:
      1. Alignment

* In the context of web forms it refers to justifying text and placing objects such as input boxes and graphics in a way that guides the eye, making it easier to follow the path of instructions.
  + 1. Repetition
* Repetition is used to unify elements of a layout. This is achieved by repeating patterns, textures and page elements.
  + 1. Contrast
* The greater difference between an image or text and their surroundings the more they stand out. This principle is usually followed by using a light coloured background and a dark text and input box borders.
  + 1. Space
* Space is the area that separates onscreen objects. Ideally, we space objects so that they are easy to perceive, rather than overlapping and obscuring them.
  + 1. Balance
* All elements of a layout have visual weight. If the elements on either side or the top and bottom of the screen are of an equal weight, then visual balance is achieved. There are two types of balance: symmetrical and asymmetrical.
  1. Functionality
     1. Useability
        1. Robustness
* Linked with feedback is support for recovery, also known as robustness. If there is a problem or the user needs to correct data or undo an action, then the system should be able to step back then forwards again without the user having to restart the entire transaction.
  + - 1. Flexibility
* Having a user pre-emptive solution where the user initiates and controls the actions is considered more flexible than one where the solution does all the prompting and the user merely replies.
  + - 1. Ease of use
* In addition to being able to perform all tasks expected of it, the solution must also make it easy for the user to understand how to perform those tasks and even allow for the user to define new tasks and a way of performing them.
  + 1. Accessibility
       1. Navigation
* Help users navigate and find content. The navigation system needs to be clear, simple and intuitive.
* Ensure that navigation system can also be done on key-board only systems.
  + - 1. Error tolerance
* Help users avoid and correct mistakes with clear instructions and the ability to undo errors by going back to a previous screen.
* Make it hard for users to make errors and avoid allowing actions that lead to errors.
  + - 1. What is the purpose of following the design principles?
* To make an attractive, readable, correct and accessible data-collection form that anyone can use, from older men and women to young children and everyone else in-between including the disabled,

**Data Acquisition software,** p 19

1. Elaborate on the nature of PHP and ASP server software.

* They are both general purpose scripting languages that is used on web servers. They are the main software worldwide that is used for acquiring data on websites, that is used mainly at server level.

1. What are back-end tools?

* Back end tools such as cPanel and Google Analytics can provide organisations with statistics on who visits their website, what browsers they use, and what information was commonly searched for.

1. Describe the nature of a cookie.

* A cookie is a small file that a web server stores on the user’s computer. Cookies typically contain data about the user, such as their email address and browsing preferences.

1. What is spyware?

* A hard-to-detect file, discreetly installed without a user’s express permission, that collects small amounts of information about user’s without their knowledge.

**Protection of rights,** p 20

1. Why is it important that organisations keep data collected secure?

* First its complying with the privacy act but it’s much more than that, if you mishandle the personal information of your customers, it can cause a financial or reputation loss to the customer. It can also have a considerable effect on undertaking business and regaining your reputation as a business operator.

1. Elaborate on each of the following:
   1. Security protocols
      1. TLS, SSL & HTTPS

* TLS (transport layer security): A protocol used to provide for communications on the internet.
* SSL (secure sockets layer): Was the original protocol before TLS arrived.
* HTTPS (hypertext transfer protocol secure): Is a combination of HTTP and SSL/TLS protocol, it provides encryption and security in terms of identification of the server.
  1. Privacy policies
* An organisation that collects data on individuals or other organisations usually has a privacy policy about how it uses the data and to whom it will disclose it. By law, privacy policies must be located on a company’s website so that they are easy to find. The policy must include details about what data is gathered and how it will be used.
  1. Shipping and returns policies
* A document that explains to customers what action they can take and the procedure to follow if they need to return items.